

ABSTRACT

[0087] A solid catalyst component useful for the (co)-polymerization of olefins is disclosed. The catalyst component is prepared by reacting an activated magnesium halide composite support with a halogenized transition metal compound and a chelating diamide compound in the presence of organo-magnesium as a promoting agent and halogenized silicon or boron compounds as an activator. The catalyst component can be used with an organo-aluminum compound to provide a solid catalyst system that is compatible with slurry and gas phase polymerization processes. Linear low density polyethylene (LLDPE) produced using the catalyst component of the present invention displays a low molecular weight distribution, improved co-monomer incorporation, low content of the low molecular weight component, and excellent morphological properties such as spherical shape and high bulk density.